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CORONA
SUBJ: MISSION 1050, PHOTOGRAPHIC EVALUATION INTERIM REPORT (PEIR)
REF [redacted] 2099

1. NUMERICAL SUMMARY

MSN NO. AND DATES:	1050-1, 19-21 MARCH 1969
	1050-2, 21-22 MARCH 1969
LAUNCH DATE AND TIME:	19 MARCH 1969/2139Z
VEHICLE NUMBER:	1651
CAMERA SYSTEM	J43
PAN CAMERA NUMBER	MASTER S/N 210, FWD-LOOKING
	SLAVE S/N 211, AFT-LOOKING
FILM TYPE:	SO-230
MISSION 1050-1 S/I NO:	D113/141/145
MISSION 1050-1 S/I NO:	D114/142/143
RECOVERY REVS:	
1050-1	REV 32, 23 MAR 1969/0032Z
1050-2	REV 50, 23 MAR 1969/0004Z

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2. CAMERA SETTINGS

FWD-LOOKING	SLIT 0.100 FILTER WRATTEN 23A
AFT-LOOKING	SLIT 0.080 FILTER WRATTEN 21

3. PERFORMANCE SUMMARY

ADVANCE CY SANITIZED WITH TEXT

THE SO-230 OVERALL IMAGE QUALITY THROUGH PASS D022 OF 1050-1 WAS CONSIDERED BY THE PET AND THE PI'S TO BE GOOD TO FAIR, WITH THE BEST OF THE PHOTOGRAPHY BEING SOMEWHAT BETTER THAN AN AVERAGE J-1 MISSION. A COMPARISON OF THE MIP FRAMES OF 1050-1 FROM THE FORWARD AND AFT INSTRUMENTS INDICATED THAT THE AFT INSTRUMENT PRODUCED SHARPER IMAGERY, BETTER DETAIL IN THE LOW AND MID BRIGHTNESS RANGES AND MORE CONSISTENCY IN FOCUS ACROSS THE MINOR AXIS OF THE FORMAT.

FOLLOWING PASS D022 (AFTER VEHICLE ATTITUDE CONTROL FAILURE) AND CONTINUING THROUGHOUT THE BALANCE OF BOTH SEGMENTS OF THE MISSION, THE IMAGE QUALITY WAS FAIR TO POOR (BECAUSE OF SMEAR) WITH RANDOM EXAMPLES OF GOOD IMAGERY. THE SMALL SLIT WIDTHS ASSOCIATED WITH SO-230 REDUCED THE SMEAR COMPONENT AND CONTRIBUTED TO THE RANDOM EXAMPLES OF GOOD IMAGERY.

4. ANOMALIES

A. ANOMALY: THE FORWARD LOOKING MATERIAL DISPLAYS A SOFT

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FOCUS AREA ALONG THE DATA BLOCK SIDE OF THE FRAME THROUGHOUT THE MISSION.

CAUSE: THE CHANGE IN FOCUS ACROSS THE FORMAT IS SUBTLE AND NOT DEFINED BY SPECIFIC BOUNDARIES. THIS CONDITION IS CONFINED TO THE DATA BLOCK SIDE AND SHOWS VARIATIONS IN IMAGE

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QUALITY PROBABLY CAUSED BY CHANGES IN FILM LIFT. THE PET DOES NOT FEEL THAT THIS CONDITION IS THE RESULT OF OR IS AGGRAVATED BY EMULSION BUILD-UP CHARACTERISTICS FORMERLY ATTRIBUTED TO SO-230. THE CLEANLINESS OF THIS MISSION IN RESPECT TO EMULSION PARTICLE BUILD-UP ON THE FILM SUPPORT RAILS WAS SATISFACTORY; IN THIS RESPECT IT WAS JUDGED TO BE EQUAL TO AN AVERAGE J-1 MISSION WITH 3404 FILM.

ACTION: NO CAUSE FOR THIS ANOMALY HAS BEEN DETERMINED. THE DEGREE OF DEFOCUSING IS NOT CONSIDERED SERIOUS ENOUGH TO WARRANT MAJOR EXPENDITURE OF ADITIONAL EFFORT AT THIS LATE TIME IN THE J-1 PROGRAM.

B. ANOMALY: PIECES OF EMULSION WERE BONDED TO THE STELLAR RESEAU PLATE ON FRAMES 133 AND 334. BOTH PIECES WERE IMAGED ON THE REMAINING STELLAR FRAMES.

CAUSE: AN UNSTABLE VEHICLE YAW CONDITION AFTER REV 22,

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WHICH ALSO CAUSED ROLL AND PITCH ERRORS, RESULTED IN THE DIRECT OBSERVATION OF THE SUN BY THE STELLAR LENS.

ACTION: NO ACTION REQUIRED.

C. ANOMALY: MINOR VIGNETTING WAS PRESENT IN ONE CORNER OF EACH HORIZON FORMAT THROUGHOUT BOTH MISSION SEGMENTS.

CAUSE: MINOR VIGNETTING HAS BEEN CHARACTERISTIC OF THE J-1 SERIES. VIGNETTING APPEARS TO BE MORE NOTICEABLE IN MISSION 1050 PHOTOGRAPHY DUE TO THE INHERENT SO-230 FILM SPEED.

ACTION: BECAUSE VIGNETTING DOES NOT INTERFER WITH HORIZON LINE IMAGERY NO ACTION IS RECOMMENDED.

D. ANOMALY: MINUS DENSITY BANDS LOCATED PERPENDICULAR TO THE MAJOR AXIS AND VARYING IN WIDTH, ARE PRESENT INTERMITTENTLY THROUGHOUT BOTH MISSIONS.

CAUSE: SIMILAR BANDS HAVE BEEN OBSERVED ON 1049 AND 1046 MATERIAL AS WELL AS FILM FROM MOST GROUND TESTS USING SO-230. THIS PHENOMENON, NOT FULLY UNDERSTOOD, IS CHARACTERISTIC OF THE FILM DURING EXTENDED INOPERATIVE PERIODS. THE BANDS, ARE IMAGES OF THE SYSTEM FILM PATH COMPONENTS, FORMED AS A FUNCTION OF ENVIROMENT AND ARE NOT THE RESULT OF A LIGHT LEAK.

ACTION: BECAUSE OF THE MINOR NATURE OF THIS ANOMALY NO

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ACTION IS RECOMMENDED.

5. CHARACTERISTIC ANOMALIES: THESE ARE PREDICTABLE, RECURRING ANOMALIES WHICH ARE CONSIDERED INHERENT IN THE CORONA J-1 SYSTEMS. A SUMMARY OF THESE ANOMALIES IS PRESENTED BELOW:

A. FOG PATTERNS ON THE FIRST, FIFTH FROM LAST, NEXT TO

LAST AND LAST FRAME OF BOTH MISSIONS. THE FOG IS CAUSED BY MINOR LIGHT LEAKS; CONTINUING EFFORT IS MADE TO MINIMIZE THIS ANOMALY.

B. DENDRITIC STATIC IS PRESENT ALONG BOTH EDGES AND WITHIN THE FORMAT OF BOTH CAMERAS OF BOTH MISSIONS.

C. MINOR BANDING IS PRESENT AT THE TAKE-UP END OF SOME FRAMES IN BOTH MISSIONS.

D. THE TIME TRACK IS MISSING AT THE BEGINNING OF SCAN OF THE FIRST FRAME OF SOME PASSES IN BOTH MISSIONS. THIS IS AN OPERATING CHARACTERISTIC OF THE SYSTEM, CAUSED BY TIME REQUIRED FOR LAMP IONIZATION.

E. EMULSION BUILD-UP ON THE INBOARD FILM GUIDE RAIL CAUSED A RAGGED FORMAT EDGE AND ALMOST TOTALLY OBSCURES THE SHRINKAGE MARKS ON THE TAKE-UP END.

F. MINUS DENSITY STREAK PARALLEL TO THE MAJOR AXIS OF THE

25X1

FILM AND MINUS DENSITY SPOTS ON THE STELLAR FORMATS WERE PRESENT INTERMITTENTLY THROUGHOUT BOTH MISSIONS.

T O P S E C R E T

END OF MESSAGE